ARCHITECTVRE

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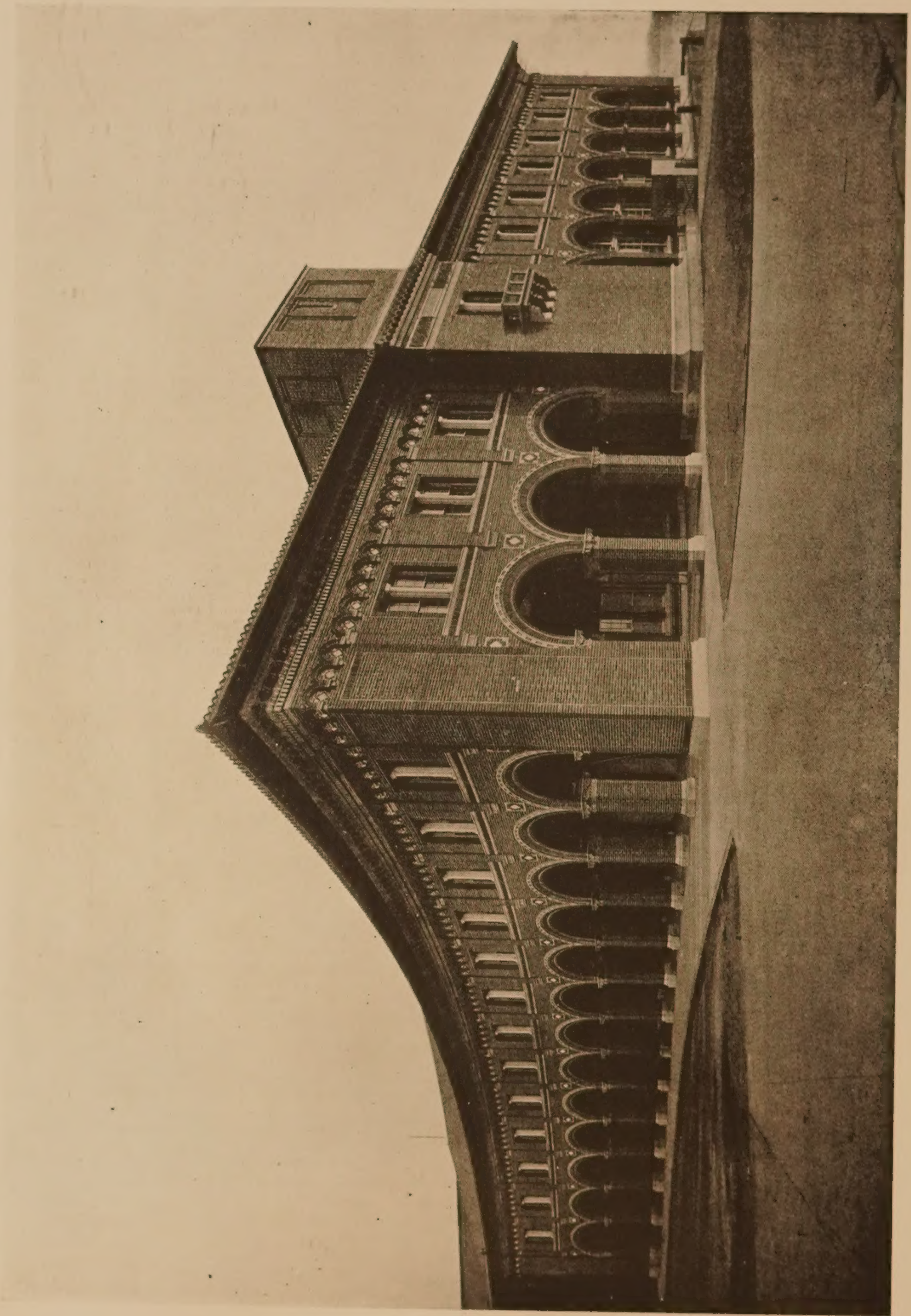

BARGE OFFICE, U. S. GOVERNMENT, THE BATTERY, NEW YORK.

J. Knox Taylor, Architect.

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IN the advertising section of November ARCHITECTURE the address of Batterson & Eisele was inadvertently misprinted as Times Building. The present address of Batterson & Eisele is The Architects Building, 101 Park Avenue, New York.

THE GRADUATE COLLEGE, PRINCETON UNIVERSITY.

CRAM, GOODHUE & FERGUSON, ARCHITECTS (BOSTON OFFICE)

PLATES CX-CXXII.

THESE buildings have already acquired an historic interest because of the fact that their location in the place that they occupy made Woodrow Wilson President of the United States. The question of a college exclusively for graduates had long occupied the attention of the authorities of the University, and that money was collected sufficient for the erection and maintenance of this college was due largely to the efforts of Andrew F. West, Dean of the college, whose ideas in regard to the location, and to a lesser degree of the method of government of the college, differed from those of Mr. Wilson, who was at that time President of the University. The Board of Trustees supported Mr. West; Mr. Wilson resigned and entered political life, with the result that in two years he was elected President of the United States.

The group of buildings housing the graduate college is composed of three or rather four different elements; first, the great tower which was erected as a memorial to Grover Cleveland, an intimate friend of Dean West, and a former member of the faculty of Princeton University; second, residence quarters for members of the graduate college; third, the dining hall, common rooms and offices, which automatically transformed a dormitory into a sort of club, and, fourth, the residence for the Dean of the college. The research work of members of the graduate college is conducted in the laboratory and class buildings of the University. From an educational point of view this college is of particular interest, because it is the first case in the world where a graduate college has been made a distinct part of a University, physically as well as educationally; there have, of course, been other cases of colleges which were exclusively graduate colleges, and of universities which included graduate students, but these latter have hitherto shared the general activities of the universities with which they were connected. The authorities at Princeton waited until a sufficient sum of money was collected to complete practically the entire group of buildings necessary to fully house the school before the work was commenced, so that an interesting and coherent whole has been obtained, instead of the patch work job which would otherwise have probably resulted, due to the insistence of different donors upon their individual architects, or to a change of mind on the part of the University itself. Fortunately at Princeton, although it does not seem possible to put all the work in the hands of one architect (and it cannot be regarded as an ascertained fact that such would be desirable) the authorities have had a pretty definite general idea as to the type of architecture suitable to the University, and have in the main selected competent architects for the several buildings. Some years ago Mr. Cram was made consulting architect for the University, and while he has not always been able to control the selection of the architects for the construction of the several buildings, since his induction into office, he was instrumental in inducing the University to employ Day Brothers and Klauder to design Holder Hall, illustrated in ARCHITECTURE some time since, and has himself done several of the buildings, as well as exercising general supervision over the design and materials of all the work. The results of this system have been apparent, and while a number of buildings completed before 1895 remain to mar the beauty and completeness of the whole scheme, the University contains such a large proportion of excellent buildings in the English Collegiate style, that it is already the most beautiful group of buildings in America, in spite of the fact that no ordered group plan was possible; it may be that this is not a defect, but a benefit, since work of this character does not readily lend itself to axial planning, but becomes interesting almost in proportion with the difficulties encountered by the architect. In the graduate school Mr. Cram has invented his difficulties, and has not made the courts exactly parallelograms, nor placed the entrances or the principal structures on the axes, and while there would appear to be a certain affectation in thus disregarding the expected, one can see the result is exceedingly good.

Take, for example, the Cleveland tower; it is natural to think of this as marking the entrance, but the entrances in this case are inconspicuous and beside the tower, instead of leading through it, and a similar state of affairs exists in the minor towers, while the great dining hall is stuck off at one corner of the group and hardly seen from the court, instead of being the dominant feature at one side. One feels that in his desire to be unconventional Mr. Cram has gone too far in the opposite direction without commensurate advantage. This is the sole unfavorable criticism which can be tenably held against the group, either as a group or as to any of its parts.

The most difficult problem in a structure of this kind is the treatment of the dormitories (which consist of a series of entries with suites of rooms of the same size opening from them) so as to prevent them from becoming monotonous without breaking them to any illogical extent. This has been here very happily managed without recourse to expedients obviously artificial, and the great refectory, both from the exterior and interior, is one of the finest of its kind in the world; its archæology condoned by its beauty. The Cleveland tower is a superb piece of design which has often-times been compared to Magdalen College at Oxford, to which it bears no closer resemblance than to the tower of the Canterbury Cathedral, or almost any other tower in which the four turreted, square topped motive is used. Magnificent as is the tower, there are others in America of comparable merit, and the tower of Holder Hall, designed by Day Brothers and Klauder, is, perhaps, even its superior in design, if not in size. But the Great Hall is unique; the ceiling is supported on curved wooden trusses formed from weathered hewn timbers, and artificially toned to a soft gray, suggestive of drift wood, which is in perfect harmony with the walls and the wainscot below. The variation in scale between the trusses and the screen and panelling is most interesting, the screen having evidently been regarded as furniture and designed to a furniture scale, while the trusses are regarded as structural. The tracery in the windows is admirable, and the electric fixtures are

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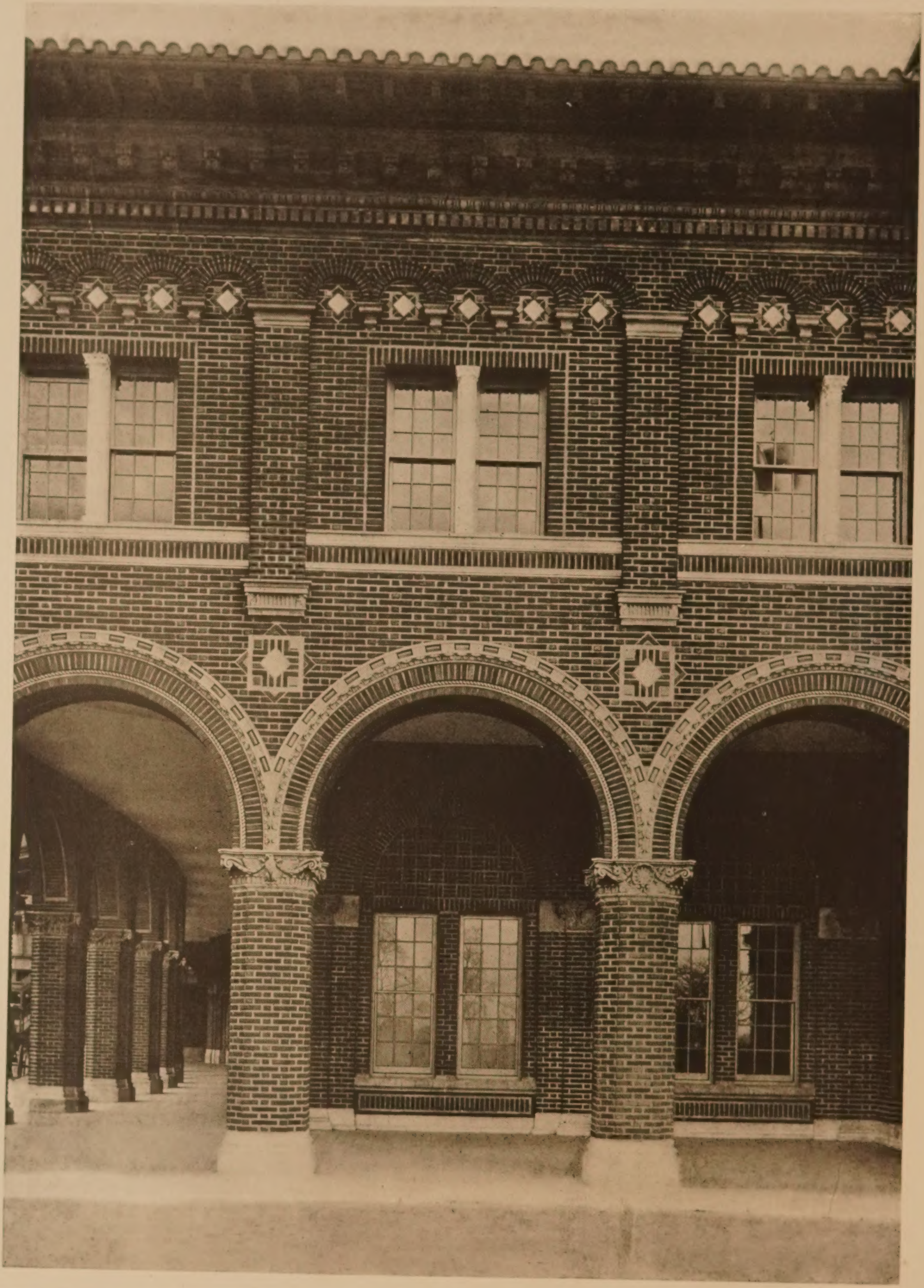


DETAIL, BARGE OFFICE, U. S. GOVERNMENT, THE BATTERY, NEW YORK.

J. Knox Taylor, Architect.

(*Continued from page 281*)

frankly electric, but perfectly in keeping with the balance of the fittings. The Great West Window has for its theme The Seven Liberal Arts of Christian Learning. Mediæval in treatment; richly prismatic in color; it exemplifies the strength and vitality of the ancient windows, built by reverent hands when the art was at its height before it was corrupted by the commercial spirit of the decadence. This window is about forty feet high and was designed and executed by William and Annie Lee Willet. The entrance to the commons is from a most interesting stone vestibule which leads on the other side to a general lounging room at once social and collegiate in character, admirably equipped with comfortable and appropriate furniture. The Dean's residence would by itself attract favorable attention and is an unusually good piece of residence work in the English style, as well as admirably proportioned to its position as part of a great group, and the whole group, while entirely in sympathy with the traditional English architecture evidently has not been assembled from fragments of the older universities; it is straightforward and intelligent design, its author perhaps a thought too well informed in the monuments of the past, but a great and sincere designer.

THE BARGE OFFICE, THE BATTERY, NEW YORK.

JAMES KNOX TAYLOR, ARCHITECT.

PAGES 280-282-284.

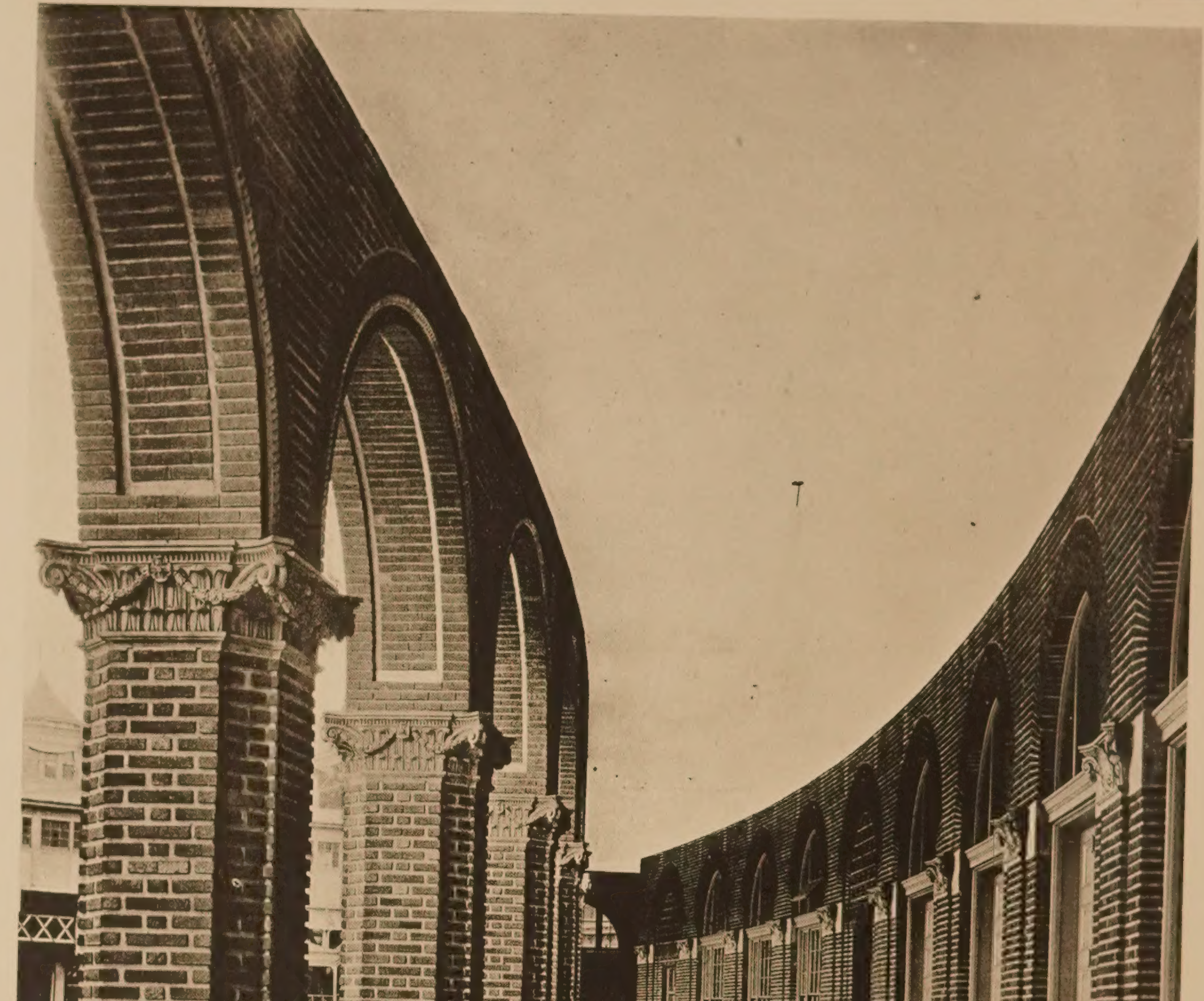
THE very notable progress in the design of public work under the administration of the former Supervising Architect, Mr. James Knox Taylor, is nowhere better illustrated than in the new Barge Office recently completed at New York. The public buildings executed under Mr. Taylor's predecessor were, at their best, tasteless, and, at their worst, ridiculous structures of pseudo-Romanesque design, constructed as a rule of rock-faced granite ashlar. These were probably well built, which is a fact to be regretted, since an early dissolution of the structure would in all probability hasten their removal, although their wretched planning has in many cases compelled the Government to dispose of or destroy them and complete new structures to take their places.

Mr. Taylor was supervising architect of the Treasury over a long period of years, and at a salary by no means commensurate with the importance of the work he was called upon to manage. The word "manage" is used advisedly, since the great number of structures designed and erected under his supervision left him little time to devote to pure design, and he was necessarily compelled to rely on his subordinates to do what is, after all, the most important part of an architect's work. Nor was he furnished with sufficient funds to induce men of high reputations to enter the office, and while occasional men of proven ability were, from time to time, members of the staff, because of the opportunity it gave them in design, he was compelled for the most part to rely on men whom he had developed himself, and the uniformly high standard of design which he has been able to secure for all the government work undertaken during his tenure of office, is therefore the more extraordinary. For the most part government work has been executed in a rather simple Classic style, which if not derived or directly copied from early American work has at least sufficient of the same sentiment so that the continuity of tradition which was broken by the Romanesque work has been resumed. He has, however, not hesitated to adopt other styles when especial circumstances seemed to require them, and in certain of the southwestern cities the buildings of the Treasury Department have suggested the Spanish architecture traditional in that region, and in certain other cases buildings of marked Italian characteristics have been used, there being, however, a sufficient reason in each case.

The site of the Barge Office is contiguous to the ferry terminals on one side and to an open park and water from the others. The nearest public building is the Customs House, some blocks away, and so tremendous in scale that any attempt to conform to it would have been hopeless, even were the necessity apparent. The buildings which were most important in relation to the Barge Office were the ferry houses adjoining, which, it will be remembered, were designed of steel, cement and copper, suggestive of no particular period (possibly excepting French Art Nouveau) and had as a dominating feature the widely extended overhanging roof, impossible to be reproduced in a pure Classic style. As to how strongly these conditions weighed in determining the design of the Barge Office ARCHITECTURE is ignorant, but they must have had some influence, since the building harmonizes very well with the structures adjoining, although it is entirely different in material, in color, and even in historic precedent, resembling some of the structures of the early Italian Renaissance than those of any other period. It is not, however, in the least archæological, and it has been designed with a fluency and ease of expression which make it distinctly current design of the best description. The use of color and of brick work in pattern has nowhere been better or more effectively managed, and while the second story and cornice are evidently of considerable weight they are adequately supported by the open loggia in appearance as well as in reality.

Some description of the various materials may be interesting to readers of ARCHITECTURE who have not an opportunity of seeing the building itself. Looking at the full page illustrated of the detail of part of the exterior, the bases of the piers are granite, the caps are of limestone, the piers themselves being of rough textured brick; the arches are formed of brick with the carved ornament of limestone, the insets above the columns have center pieces of marble, and the four little squares in the corner of the large square are of colored matt glazed tile, dull blue, green and buff. The corbels underneath the pilasters, the belt course and the caps of the pilasters, and the corbels underneath the small arches are again of limestone, while the columns forming mullions in the windows, and the square insets above the centers of the arches, which act as a sort of frieze, are of marble, again surrounded with colored tile. The lower part of the cornice is of limestone, the beams supporting the roof of fireproof wood, and the roof is of green tile. The division of the windows into small lights is a notable departure from the current habit of public design, and probably assists the scale of the building more than any other single feature, and it would be well to suggest here that large single lights of glass are not necessary in public buildings, although it is customary so to treat the windows. We have most excellent precedent of the small panes in every great public building erected more than fifty years ago,

(*Continued page 285*)



LOGGIA, BARGE OFFICE, U. S. GOVERNMENT, THE BATTERY, NEW YORK.

J. Knox Taylor, Architect.

(Continued from page 283)

and it would seem that what was, and continues to be, good enough for the capitol at Washington ought to be good enough for the other public buildings. The importance of the subdivision of windows in their effect upon scale can hardly be overestimated, and yet it is habitually never even considered as a possibility for public work, the architects apparently thinking that subdivided windows are necessarily domestic in character, forgetting that all the tremendous and successful Neo-Grec structures at Washington, as well as the monumental buildings of Sir Christopher Wren in Europe and practically all the superb English and American churches, even including the Cathedral of St. Paul's in London had sash divided. Scale and personnel may be added to otherwise cold pieces of design by this simple means, but domesticity never, unless the building itself is domestic in character. The curved front of this building has been most simply handled; it apparently has not worried or disturbed its designer in the least, and the logic of this treatment is so obvious that in many similar cases it has been overlooked, and other architects have striven for monumentality by placing pavilions at the ends and a variation of the surfaces without raising the quality of design or adding to its practicability. So simply, indeed, has this been done in the Barge Office that the curved loggia has a plain flat ceiling without any ribs which would emphasize the distortion at the bays, and even without a molding or cornice at the junction between the walls and ceilings, which would perhaps improve it. The building has been discussed at such length, not only because of its architectural merit, but because it possesses so many points of distinction from current design, and should possess to our architects great educational qualities.

THE LAW OF ARCHITECT, OWNER AND CONTRACTOR.*

BY CLINTON H. BLAKE, JR.

(Of the New York Bar).

(Continued)

It is not necessary that the construction contract, any more than an ordinary contract, shall be contained in one instrument solely, and other conditions or provisions may be incorporated in the contract as a part thereof by proper reference to them in the main instrument (Francis v. Heine etc. Co., 105 Federal 413, reversed, but on other ground, 109 Federal 838; Howard v. Pensacola etc. Co., 24 Florida 560).

Thus the provision contained in Article I of the ordinary "Uniform Contract," as adopted by the American Institute of Architects and the National Association of Builders, providing that the drawings and specifications are made a part of the contract, is good; and when they are so incorporated in the contract, they become at once, by this incorporation, elements of direct importance in determining the rights of the various parties (Wilemet Steam etc. Co. v. Los Angeles College Co., 94 Cal. 239; Howard v. Pensacola etc. Co. supra., 24 Fla. 560; Cleveland etc. Railroad Co. v. Moore, 170 Ind. 328; but see Hayes v. Wagner, 113 Illinois Appeals 299). The mere fact that the plans and specifications are not attached to the contract, although it is agreed that they shall be, has been held immaterial where the contract itself is sufficiently definite to determine the rights of the parties (Womble v. Hickson, 91 Arkansas 266).

While there would seem to be no damage occasioned either party by not attaching the plans and specifications as agreed, where the contract is absolutely definite and clear without them, nevertheless where the provision that they shall be attached is made a definite term of the contract and is clearly for the purpose of protecting the parties by making definite and clear every term of their agreement, it would be unsafe to consider the rule as stated to be of such a character as to warrant its extension to such a case, or to warrant the taking of liberties with the contract, to the extent of not attaching the plans and specifications when it has been specifically convenanted that they shall be attached.

The provisions in the various States in regard to building and other contracts differ as is natural in many respects, and, as in the case of a lien, the only really safe course is to become thoroughly acquainted in a given case with the special provisions of the statute in the jurisdiction in which the case arises. Thus, in California, it has been held (Condon v. Donohue, 160 Cal. 749, that the contract cannot support an action for damages for its breach unless it is recorded), and that where an ordinance specifies that a permit must be obtained, a contract to construct without a permit is not lawful and will not be allowed to form the basis of a civil action (Smith v. Luning, 111 Cal. 308), while in Connecticut an agreement to build from plans and specifications not submitted to and approved by the officers by whom the statute required they should be approved, has been held to be void (Wilcox Manufacturing Co. v. Brazos, 74 Conn. 208). While the foregoing are instances of special State statutes, they should be noted especially as excellent examples of the rule that prudence requires that in the making and performance of the contract, all the parties should give proper heed to such ordinances and statutes as may apply, even though it be considered that the application is not necessarily of great importance. In this same connection a distinction should be noted between a contract which is wholly void, because it is not properly consummated, or because it covers the doing of an illegal act, and a contract which in itself is perfectly lawful but is not carried out in a lawful manner. The latter contract will not be declared illegal as a whole so as to prevent a recovery under it (Fox v. Rogers, 171 Mass. 546). The mere carrying out of a contract in an illegal way does not make the contract itself illegal (Barry v. Caper, 151 Mass. 99), and even where the contract does contain certain provisions which are not in accordance with statute or ordinance, it seems that it may possibly in some cases, and especially where nothing illegal was intended, be sustained (Favor v. Philbrick, 7 New Hampshire 326; Waugh v. Morris L. R., 8 Q. B. 202).

APPOINTMENT OF ARCHITECT AS ARBITRATOR.

One of the provisions of the ordinary contract which may be the most helpful, if properly drawn and understood, and at the same time is perhaps as apt to give rise to difficulty as any other, is the provision in regard to the decision of the architect being final and in regard to his position as arbitrator. The provision on this point in the form of the uniform contract adopted by the American Institute of Architects, to which I have already referred, specifies that the decision of the architect "as to the true construction and meaning of the drawings and specifications shall be final". This provision is perfectly proper and is recognized as entirely valid by the courts. Indeed, a provision in much fuller form

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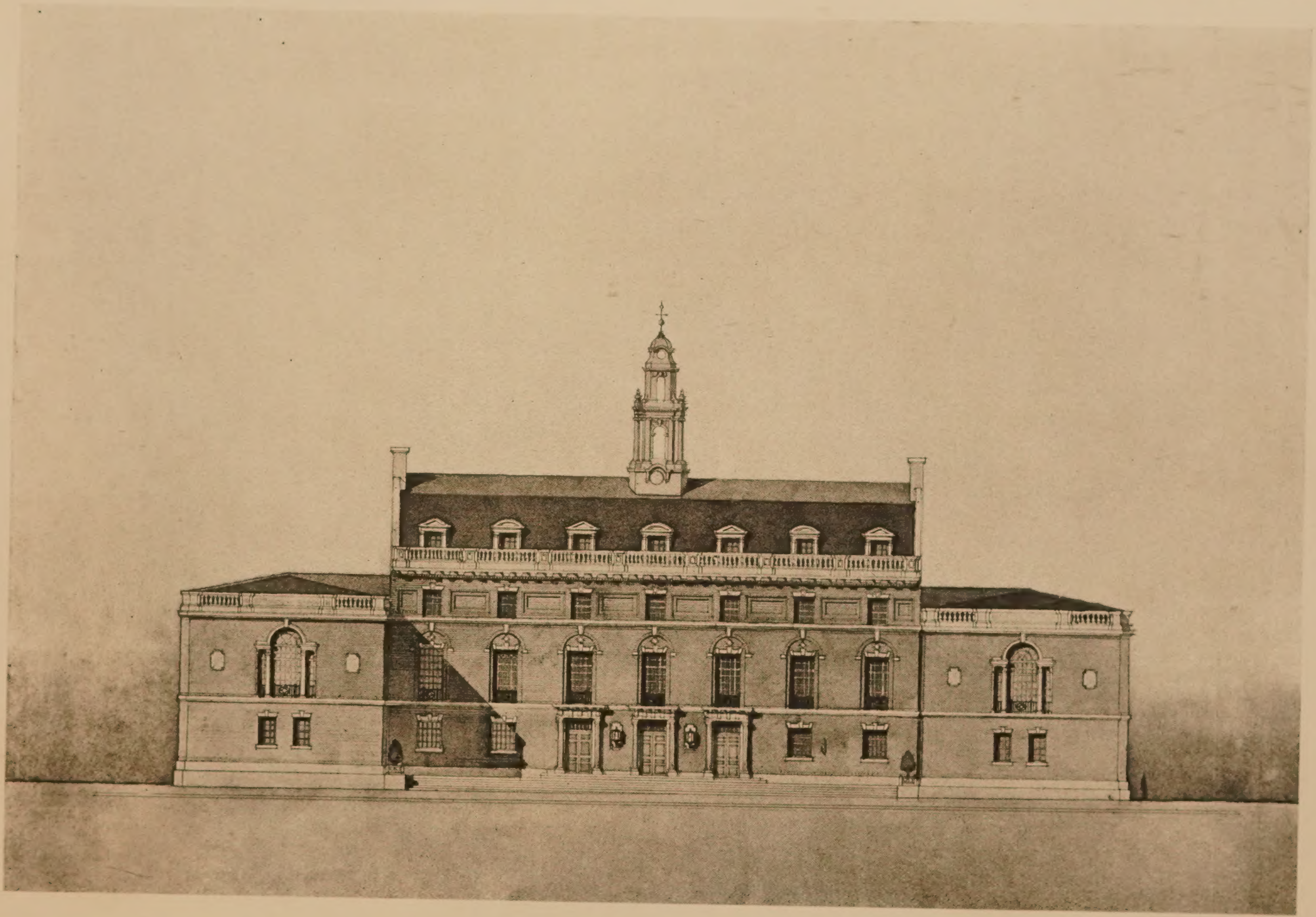
*This series of articles began in the June (1913) number.



COMPETITIVE DESIGN, CITY HALL, WATERBURY, CONN.

Cram, Goodhue & Ferguson, Architects (New York Office).

(*Continued from page 285*)

and covering many points which the quoted provision would not touch, such as a provision that the certificates, determinations and decisions of the architect shall be final and conclusive, has been recognized as valid, both in the Federal courts, in the courts of New York and in the courts of other States and of other countries (Ripley v. United States, 223 U. S. 695; Connors v. United States, 130 Federal 609; Farrel v. Levy, 139 (N. Y.) A. D. 790; N. Y. Building Co. v. Springfield etc. Co., 56 A. D. (N. Y.) 294; Sweet v. Morrison, 116 N. Y. 19; Handy v. Bliss, 204 Mass. 513; Brown v. Decker, 142 Pa. State 640; O'Brien v. Reg., 4 Can. Supreme Court 529; Courtney v. Provincial Commission, 41 Nova Scotia 71). In restriction of the broad general rule as stated it should be noted that its application is on the assumption that there is no fraud (Ripley v. U. S. and Building Co. v. Springfield Co. supra), or mistake (Farrel v. Levy and Building Co. v. Springfield Co. supra) in the transaction. The provision quoted from the uniform contract, whereby the architect is to decide in regard to the true construction and meaning of the drawings and specifications, does not apply, the New York courts have held, to disputes relative to the construction of the contract; and in a case where the question related to the necessity of the contractors filling in between the iron beams on the basement floor with terra cotta blocks under the provisions of the contract between him and the main contractor, it was held, that this had nothing to do with the drawings and specifications, and that the decision of the architect relative thereto was, therefore, not controlling (Isaacs v. Dawson, 70 A. D. (N. Y.) 232—judg. aff'd 174 N. Y. 537). Another example of the comparatively strict construction which the courts have placed in some instances upon the provisions vesting the architect with large powers of decision or arbitration, is the holding of the British courts that, even where it is provided that any question arising with contractors, or relating in any way to the contract or involving the determination of a dispute between any of the contractors in regard to the building, shall be determined by the architect, whose decision shall be absolute and final, yet the differences between the contractor and his mployees, as to extras, will not be covered by such provision, and that such provision will be applied only to disputes as to the manner of carrying on the different departments of the work (Pashby v. Mayor etc. of Birmingham, 86 E. C. L. 2).

While the courts have applied the restrictions noted, in the application on the general doctrine, it is still true that they have, with substantial unanimity, recognized the validity of provisions vesting the architect with many different and broad authorities in his character of supervisor of the works and arbitrator of disputes arising in connection therewith. Thus they have sustained and enforced the provisions so common in the building contracts and general conditions in use at the present day, providing that to the architect may properly be left the determination of any matters of differences (Mitchell v. Dougherty, 86 Federal 859), whether relating to the quantity, quality or value of the work done (Elliot v. Missouri etc. Co., 74 Federal 707; Chicago etc. Co. v. Price, 138 U. S. 185); or to payments, or to the securing of certificates preliminary to the payment of moneys due (Wilcox v. Stephenson, 30 Fla. 377; Mitchell v. Kavanagh, 38 Iowa 286; Oldershaw v. Garner, 38 V. C. Q. B. 37); or to performance (Wilcox v. Stephensen, 30 Florida 377; Schliess v. Grand Rapids, 131 Michigan 52); or to the loss or the expense or damage occasioned to the owner through the fault of the builder (White v. Abbott, 188 Mass. 99); or in regard to the measurement of the work (McMahon v. N. Y. Co., 20 N. Y. 463). Under certain conditions this general rule may not apply. For instance, the provision requiring a certificate of the architect to be secured, before payment is made, will not be enforced where the death of the architect has intervened (Pleasant College v. Colett, 142 Kentucky 342); and the provision making the architect the arbitrator of the amount or value of the work performed, or of the correctness of its performance, will not prevent the question of substantial performance from being raised (Schliess v. Grand Rapids, 131 Michigan 52), or prevent the owner from refusing payment on the ground that substantial performance has not been had (Oberlies v. Bullinger, 75 Hun. 248).

CONDITIONS RE EXTRAS.

One of the most important of the contract conditions is the provision in regard to the necessity of securing a written order for extra work, the importance of which to the architect, as distinguished from the owner, has already been considered at some length. It is especially advisable on account of the disputes that may arise in connection with this provision, that it be made in such form as to preclude any misunderstandings or difficulty, so far as this can possibly be done. The Connecticut courts have recognized as valid and had enforced the following form of proviso: "The contractor shall make no claim for extra work unless the same shall be done in pursuance of a written order from the architect, and all such claims shall be made to the architect in writing before the next ensuing payment, or shall be considered abandoned by the contractor (O'Keefe v. San Rafael Church, 59 Conn. 551). This form might well be made a trifle fuller to prevent any possibility of mistake, but is interesting as exemplifying the main and essential points which the contract in this connection should cover. The disposition of the courts to protect the owner and to enforce the provisions in his favor, requiring conditions precedent as to extra work to be complied with, is shown by the holding of the New York courts, that, even if there be a separate provision in the contract to the effect that disputes in regard to the value of extra work shall be submitted to arbitration, yet this will not in any way negative the effect of a provision requiring the builder to produce the architect's certificate of the satisfactory completion of the extra work. Inasmuch as the arbitration provision in such a case has to do merely with the value of the extra work, as distinguished from the proper completion of the work, the decision is clearly justified (Fox v. Powers, 65 (N. Y.) A. D. 112).

The courts have likewise very generally upheld, and recognized the validity of, the other provisions of the ordinary building contract, such as the provision that no extra work shall be done without the written order of the architect, and that no payment need be made for it, if done, without the production of the architect's order (Langley v. Rauss, 185 N. Y. 201). The order may, however, be construed as having been given by reason of some additional act of the parties, such, for instance, as the adoption of new specifications requiring extra work, which has been considered to constitute a proper order for that work (Hadden Construction Co. v. Rossiter etc. Co., 136 A.D. 601—compare O'Keefe v. St. Francis's Church, 59 Conn. 551). The validity has been upheld also of provisions that there shall be no departure

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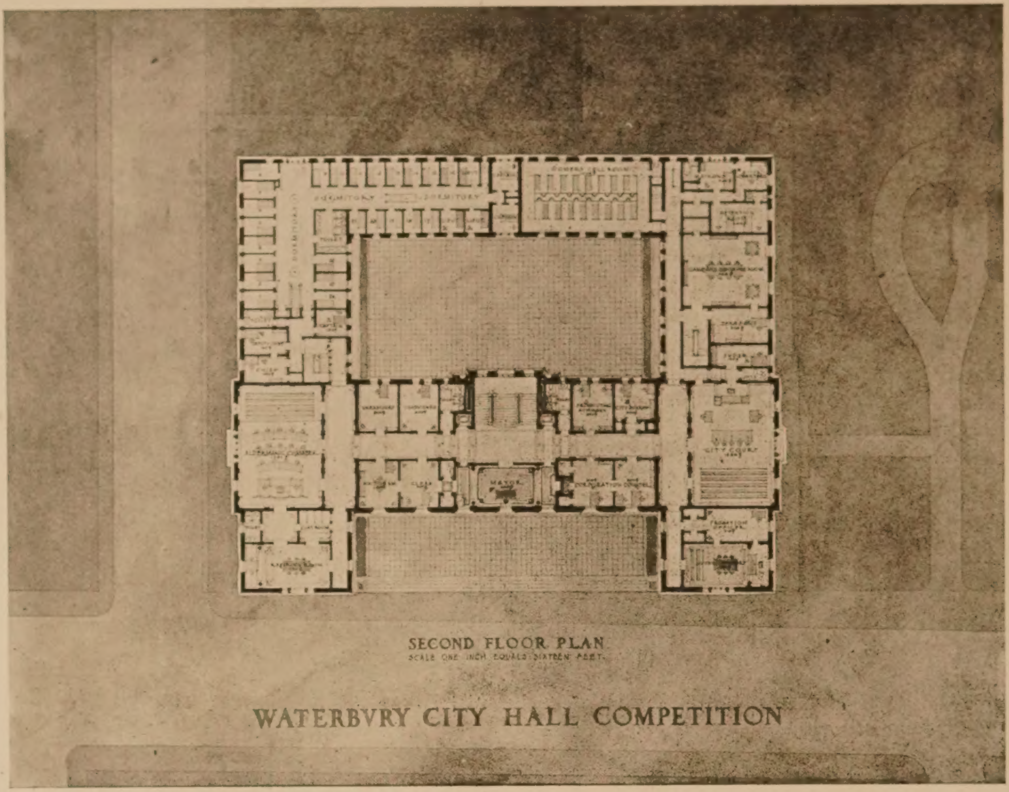
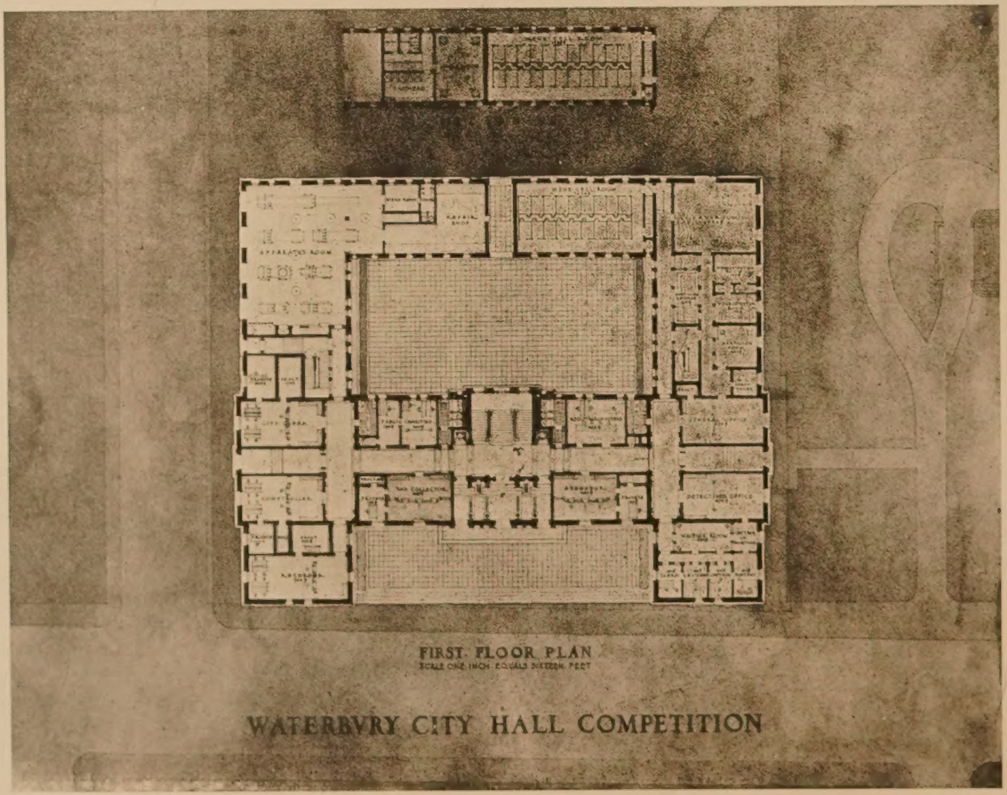

SECOND FLOOR PLAN
SCALE ONE INCH EQUALS SIXTEEN FEET
WATERBVRY CITY HALL COMPETITION


FIRST FLOOR PLAN
SCALE ONE INCH EQUALS SIXTEEN FEET
WATERBVRY CITY HALL COMPETITION

COMPETITIVE PLANS, CITY HALL, WATERBURY, CONN. Cram, Goodhue & Ferguson, Architects (New York Office).

(*Continued from page 287*)

from the contract terms or the specifications or drawings, without the consent of the architect or engineer in charge (White v. San Rafael etc. Co., 50 Cal. 417), and that there shall be no subletting of the contract unless the owner's consent is secured (Danforth v. Tennessee etc. Co., 93 Alabama 614). While these provisions are inserted for the benefit of the owner, he may, of course, waive them if he so elect (Danforth v. Tennessee etc. Co. supra; Bartlett v. Stamfiled, 148 Mass. 394, opinion by Holmes 9).

RIGHT OF OWNER TO COMPLETE.

It remains to consider two of the points which it is perhaps as difficult as any to properly control and anticipate in the provisions of the building contract, viz: the question of the right of the owner to complete the work in the event of the refusal or failure of the contractors so to do, and the question of liquidated damages. There is no question but that the ordinary provision that upon the failure of the builder to do the work the owner may complete the contract and employ others to that end is good (Mahoney v. Oxford Realty Co., 133 A. D. (N. Y.) 656); and the courts have been liberal in their construction of such provisions (Duplan Silk Co. v. Spencer, 115 Federal 689). The difficulty is to provide for unseen contingencies and still do justice, both to the owner and to the contractor. The form of the contract at this point, as contained in the "Uniform Contract," Article V thereof, is comparatively plain and full, though it will be noted that, providing as it does that the owner may provide the labor and materials for the prosecution of the work, should the contractor refuse or neglect to supply them, or neglect to prosecute the work, under the wording of the clause as given the owner would still be able to step in and complete, even though the neglect or refusal on the part of the contractor might be entirely justifiable. Article VII of the "Uniform Contract" attempts to deal with this situation, and to make provision for the situation, where the delay is traceable to the owner, architect, or others, and is not the fault of the contractor. From the point of view of the contractor, however, if not indeed of all parties, surely it would be preferable if these articles could be stated in such clear and consecutive form that there could be no doubt of exactly what is meant on every point. A few extra clauses in a contract of this character may in the end well be the cause of a considerably lessened degree of difficulty and litigation.

(*To be continued*)

THE ARCHITECTURAL LEAGUE OF NEW YORK.

THE twenty-ninth Annual Exhibition will be held in the Galleries of the American Fine Arts Society Building from Sunday, February 8th, to Saturday, February 28th, 1914.

The Annual Dinner will be given on Friday, Feb. 6th, and the League reception on Saturday, February 7th.

The Committee solicits correspondence with exhibitors wishing to send drawings with models and cartoons illustrating in combination the architectural, sculptural and decorative scheme of a single important work.

The Catalogue Committee solicits subjects for publication. Address Stowe Phelps, 215 West 57th Street, not later than November 30th, 1913.

Competitions are to be held under the auspices of the Architectural League for The Henry O. Avery Prize for sculpture, a prize of $50 presented by the late Mrs. Samuel P. Avery in memory of the late Henry O. Avery, and a Special Prize of $300 for the best design submitted by an architect, sculptor and mural painter in collaboration.

THE "HOUSE OF NONSENSE."

ON some of the Northern fair-grounds the stale delights of zigzag railways, great wheels, and the like, are giving place to "The House of Nonsense," which seems to embody a combination of more or less useful object-lessons illustrative of the enormities of the jerry-builder and the fads of the "garden-city" architect. According to a correspondent of the *Manchester Guardian*, "The House of Nonsense" is a square-built house with doors and windows, quite ordinary outside, but most extraordinary inside. As soon as you enter you find that everything is topsy-turvy. One flight of stairs is moving up slowly, half of another is coming down and the other half is going up, while the balusters are leaping about madly from side to side. Walking on what seems to be a Brussels carpet, the floor suddenly gives way beneath your feet, but you are only dropped a few inches. You step on a harmless-looking board, which begins to fly backwards and forwards; you jump off this upon another, which rotates swiftly; then you have to cross an apparently bottomless tank (really only an inch deep) on a tightrope; landed safely on the other side, you find that the only way down to terra firma is by a chute, which fires you out on a mat on the hard floor beyond. Somewhat perturbed by these and other adventures, you sit down on an apparently comfortable seat, which at once drops down and deposits you on the boards. You try a second seat, only to be hurled violently in the air. Seeking the exit, you become involved in a wooden maze, the only way out being into a ridiculous monkey-cage. Retracing your steps, a sudden gust of artificial wind blows off your hat. Tired and thirsty, you espy an American soda-fountain and order a cool drink, but receive instead an electric shock. Then they let you out.

VENTILATION: ARTIFICIAL OR NATURAL.*

TO secure a texture of air indoors that more nearly resembles that outdoors is the ambition of sanitary engineers who have anything to do with buildings or their construction. To live indoors and still enjoy some of the purity of the air that is to be found in the open is a matter of vital concern to the average worker, for the greater part of his day is passed under roofs and inside walls. Civilized man has been dwelling in his house for ages, adding comfort to comfort with apparently little regard as to what such confinement cost him in health and vigor. His eyes, however, have been suddenly opened, and that within a bare generation, for he has seen and known of the response which the "white plague" sufferer has made living under clear skies. He is learning something of the connection between the shut-in-ness of his office, shop and sleeping apartment and his occasional ills and ailments. He is being persuaded that where the real sick are doing so well there must be something worth while for him in the air tinted and colored by the sun and toned and perfumed by lake and stream, forest and field.

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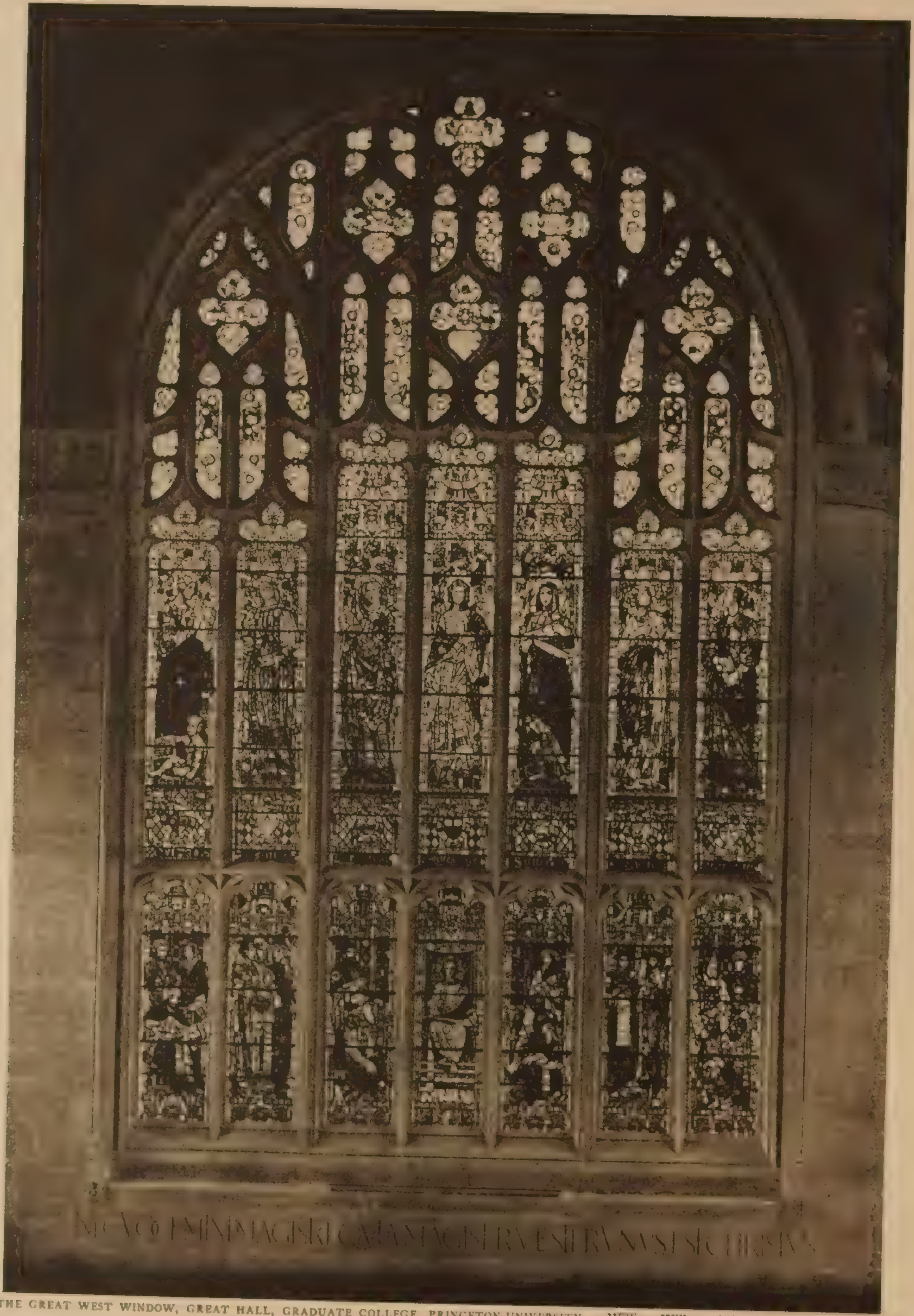
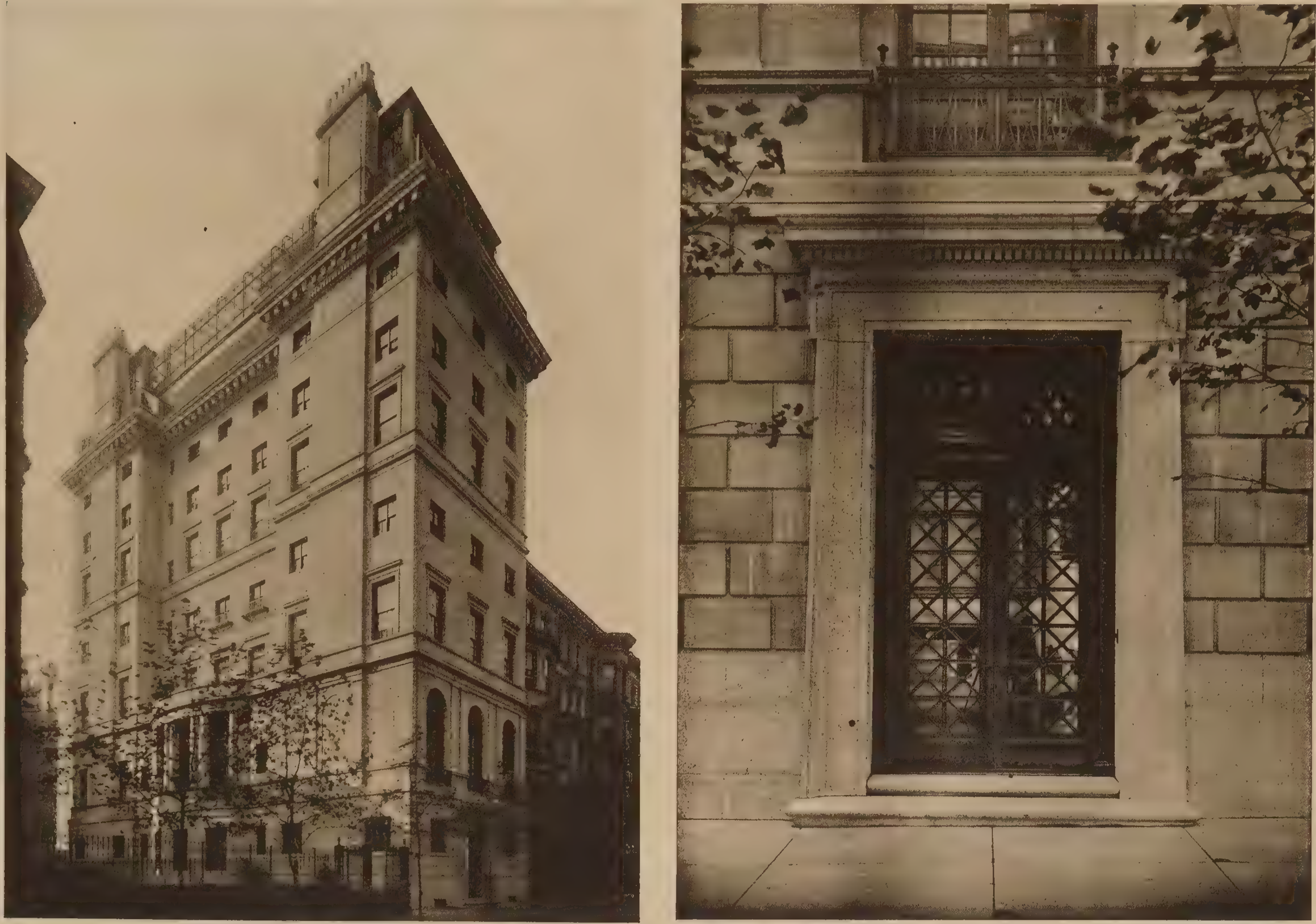
*Paul W. Goldsbury, M. D., in the "Lancet-Clinic."

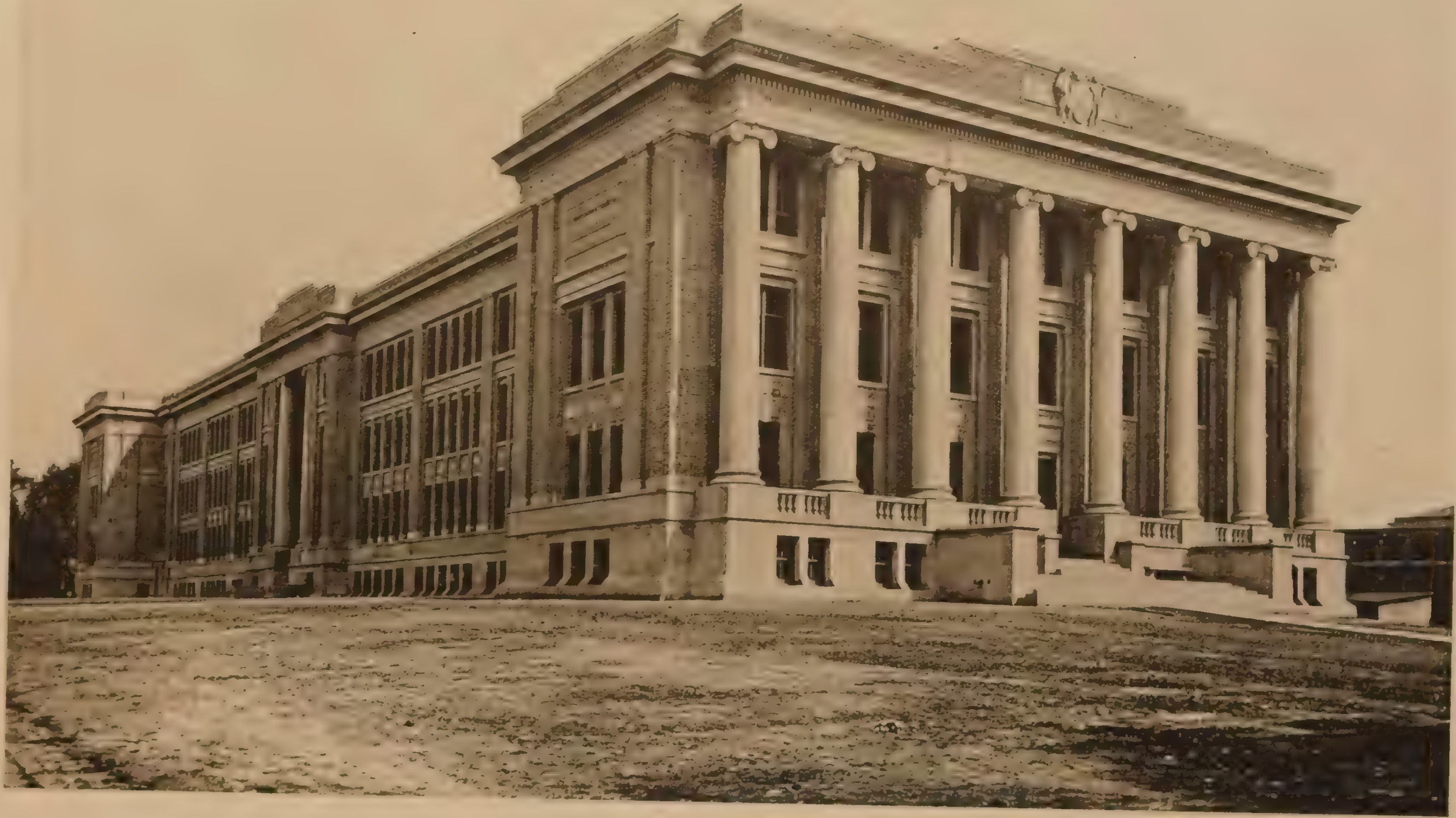


THE GREAT WEST WINDOW, GREAT HALL, GRADUATE COLLEGE, PRINCETON UNIVERSITY. William Willet and Annie Lee Willet, Artists. Subject: "The Seven Liberal Arts of Christian Learning."



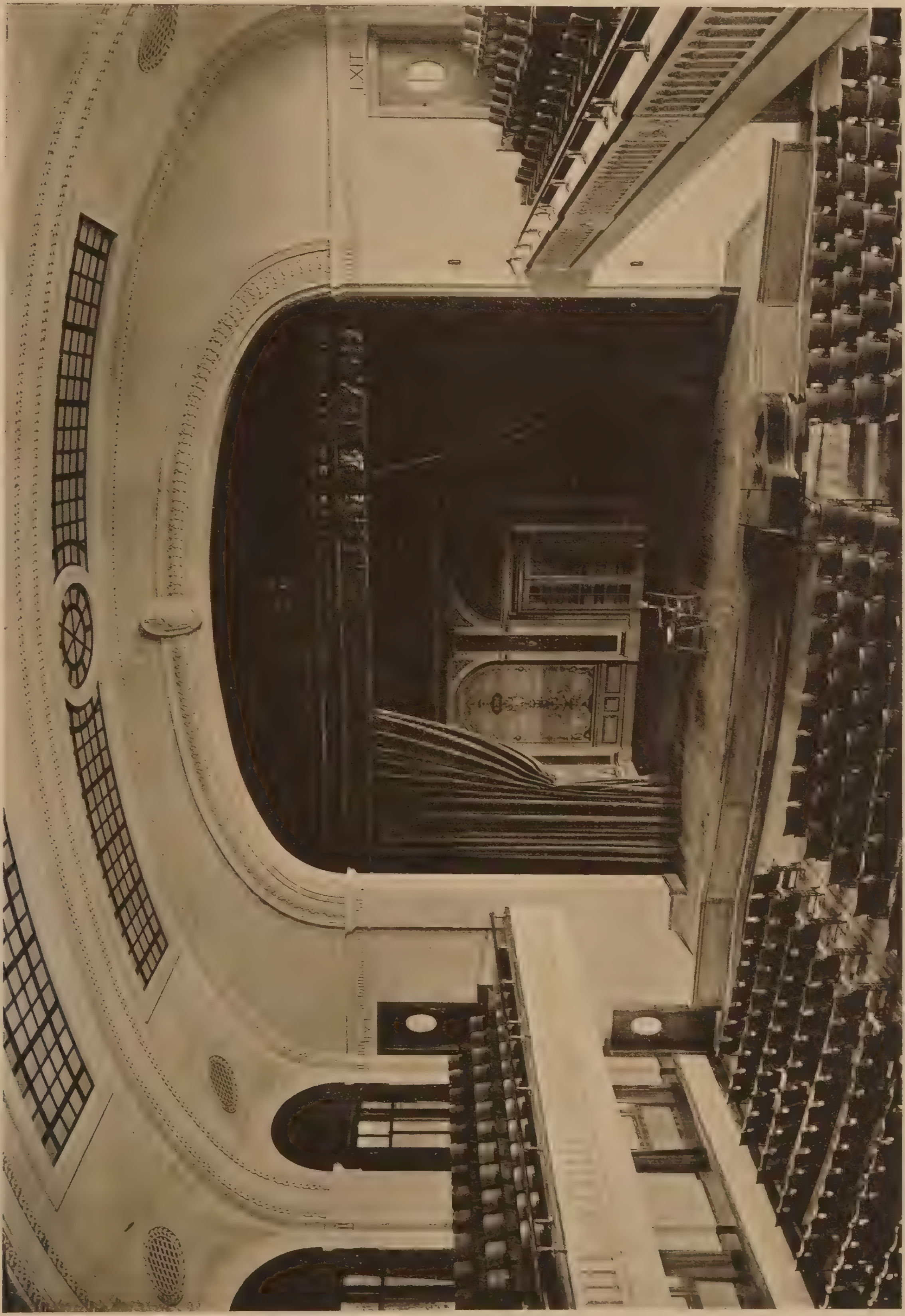
RESIDENCE, JOHN D. ROCKEFELLER, JR., 10 WEST 54TH ST., NEW YORK.

William Welles Bosworth, Architect.



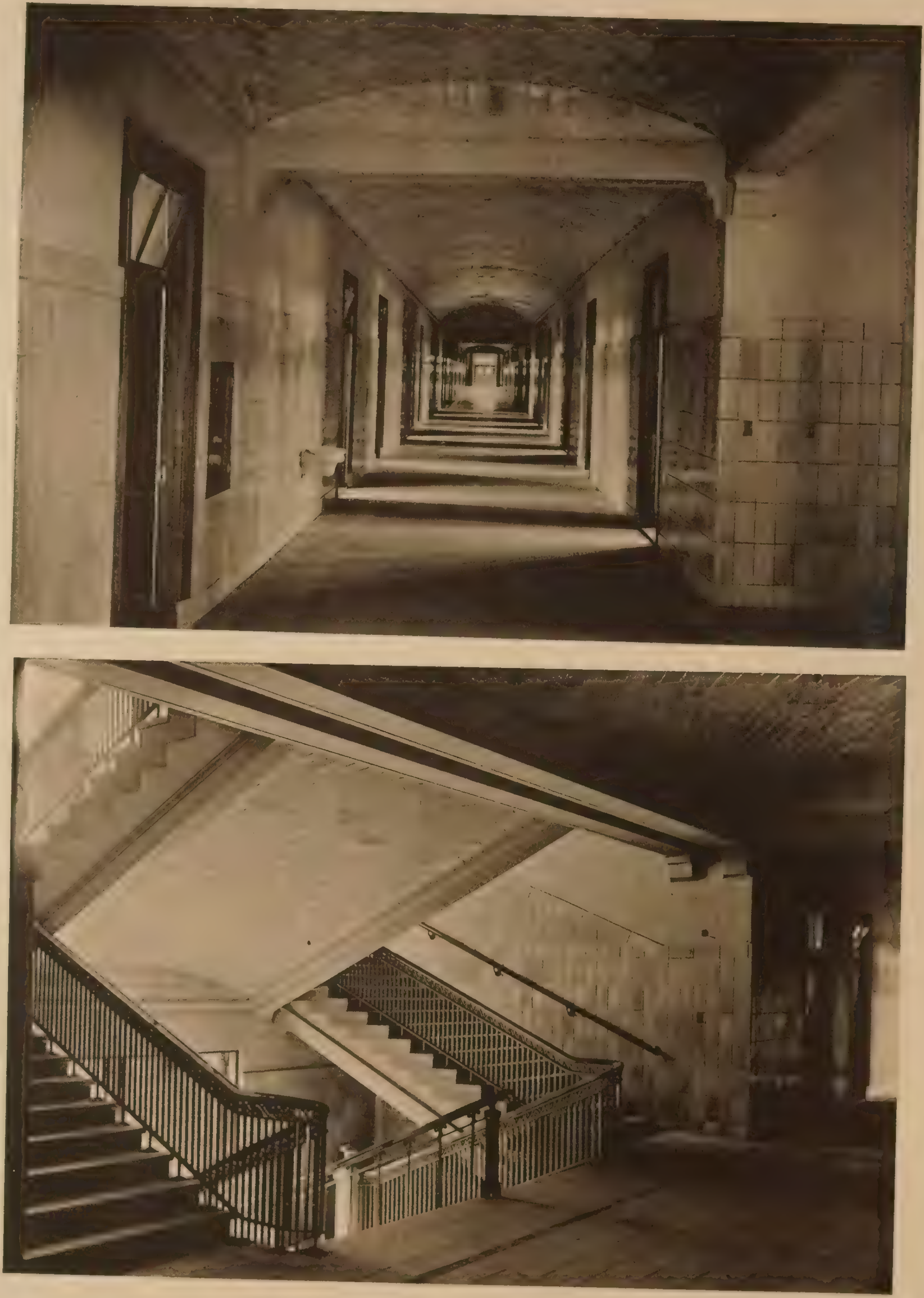
HIGH SCHOOL, ALBANY, N. Y

Starrett & VanVleck and Oran Winthrop Rice, Architects



AUDITORIUM, HIGH SCHOOL, ALBANY, N. Y.

Starrett & VanVleck and Oran Winthrop Rice, Architects.



DETAILS, HALL, HIGH SCHOOL, ALBANY, N. Y.

Starrett & VanVleck and Oran Winthrop Rice, Architects.

(Continued from page 289)

The human race has always needed shelter; a roof is wanted in all climates, either to protect from the rain and snow, or to shield from the light and heat of the sun. The play of the elements and the changes of temperature require walls also set so close as to shut away winds and cold. The house has been divided into compartments. Rooms afford individual privacy or establish limits necessary for business or housekeeping interests. In a thousand and one ways has the home and the school, stores, factories and all sorts of buildings been made snug, comfortable, or divided up so as to anticipate every little thing which has to do with usefulness and service. The occupants have been protected from the struggles of the elements out of doors and the changes of the seasons, and the structures have been more and more adapted and furnished and made to serve the man in his work, his studies, his whims, his pleasures. But the finished, the complex building is seen more and more to complicate and obstruct the free circulation of air. Man is so occupied with his art, his craft, his own creation, that he has forgotten the physical breath of life. The genius of the scientist and physician, the skill of the engineer and builder, all added to the concern and diligence of the janitor, have not met satisfactorily the problem of fresh air. The patient sufferer of tuberculosis, though compelled to lie still, has been forced to listen to the stiller voices of Nature, and learned lessons from her heart and ways which must become known everywhere.

All sorts of ventilating systems have been used and devised to introduce, purify, moisten and change the air. To continually bring the large quantity of air necessary in factories, schoolhouses and large public buildings, to wash out the dust, to heat, and at the same time keep up the humidity, entails an expense which seems prohibitive in the case of smaller buildings and dwelling-houses. The demands for sufficient moisture where cloth fabrics are woven have long been realized and have been met by the introduction of elaborate apparatus for humidifying the air. The popular recognition of the demands of the human fabric for moisture comes long after. To heat, to moisten, to remove the dust and to supply the quantity of oxygen considered necessary for each individual, is only tackling a part of the problem in giving him the kind of air he needs. Students who were endeavoring to serve the public in providing better ventilation have met with success in a measure. Things might have been worse. They have had to fight organized greed and that race for wealth and competition which produces crowding and congestion, a tide very difficult to stem. These students, in the practical application of the results obtained in their laboratories, have been preparing the way and educating the public in ventilation. But it remains for those compelled to live in the open to carry forward such labors. Man's workshop is always more or less restricted, but the laboratory of Nature has practically no bounds.

How much people can be herded and boxed up together and not impair both their own health and the efficiency? The summer camp furnishes a marked contrast to the stuffy office and the winter apartment as to the tonic qualities of the free and fragrant air. Many of the newer banking and trust company offices show an evidence of a concession to that elemental fact that breathing space is necessary. The height of their ceilings seems to indicate something of a protest against the low-ceiled rooms of the day. It must be also a matter of good business policy to afford the high officials of such and other large institutions elbow-room on all sides where they have important affairs to transact. Precision in work and clarity in mind and thought must be nourished by a generous amount of atmosphere. There are virtues in the high-vaulted cathedrals in the space afforded the heated and fouled air to rise and escape.

The Massachusetts Hospital School, Canton, and Children's Hospital, Longwood, have found quite a helpful suggestion from a very primitive source of architecture which they have adapted to their own needs. The Indian tepee emphasized some very ordinary lessons in physics. The Indian is said to live in his own chimney; at any rate, he has more or less fresh air coming in the doorway or under his walls, and much of the bad air must, of course, follow the natural drift, rise and escape with the smoke of his fire at the apex. Windows are seldom kept open at the very top of a room, and even if they were the ordinary ceiling is horizontal, so that there are pockets or large spaces where the air is not changed. If the ceiling or roof slopes, then the air as heated tends to flow upward all the time till it finds an outlet. Now the ceilings in these hospital buildings slope so as to allow the air from the rooms to drift into that uppermost space (in this case about 8 ft. across), under the ridge running the length of the building between the gables at the ends of the roof. In fact, that part of the roof is raised so as to allow windows to be put in on either side. One is immediately struck in going through these buildings, particularly if any windows are opened below and above, at the freshness of the air. The currents from the ordinary levels to those under the apex of the roof seem to establish such a circulation that even the harmful odors and gases are wafted upward and entirely out of the building. When the air is still outside, that from within will come out of the windows opened on both sides of the roof. But with a wind, those on the leeward side, away from the direction from which the wind comes, only are opened. In that way, instead of the air being driven back in at the roof, it is sucked out. The genius of the white man has gone the Indian one better on that point. Of course, in such an arrangement the quantity of air passing in and out requires an extra amount of heat, but there are compensations. The response of the patients treated in these sanatoria seems to warrant the added cost of fuel.

In a broad study of all these considerations of purity of air and ventilation, one reaches the conclusion sooner or later that health is a matter of space, of variations in the character of the air, and that unobstructed nature is a master teacher in these arts. Consider how the movements of the sun, the rotation of the earth, produces the changes in temperature, and add to these the outlines and area of land and water, hills and valleys, all the geographical and topographical considerations which affect the direction of air-currents, their moistness and dryness. The earth in its geological outcroppings and chemical strata affect the air "electrically," one might say. The life of the woods, the fields, the sea, add to the character and aroma of the air. By all these forces playing in and out freely, Nature can present all sorts of faces and moods; she revitalizes the atmosphere by gentle or more abrupt gradations. Can artifice approximate all these physical variations?

The hospital above described, with ample grounds about it, should be thought of as at a stage about midway between the regions where the elements are free and untrammelled and the pretentious office building in the heart of a large

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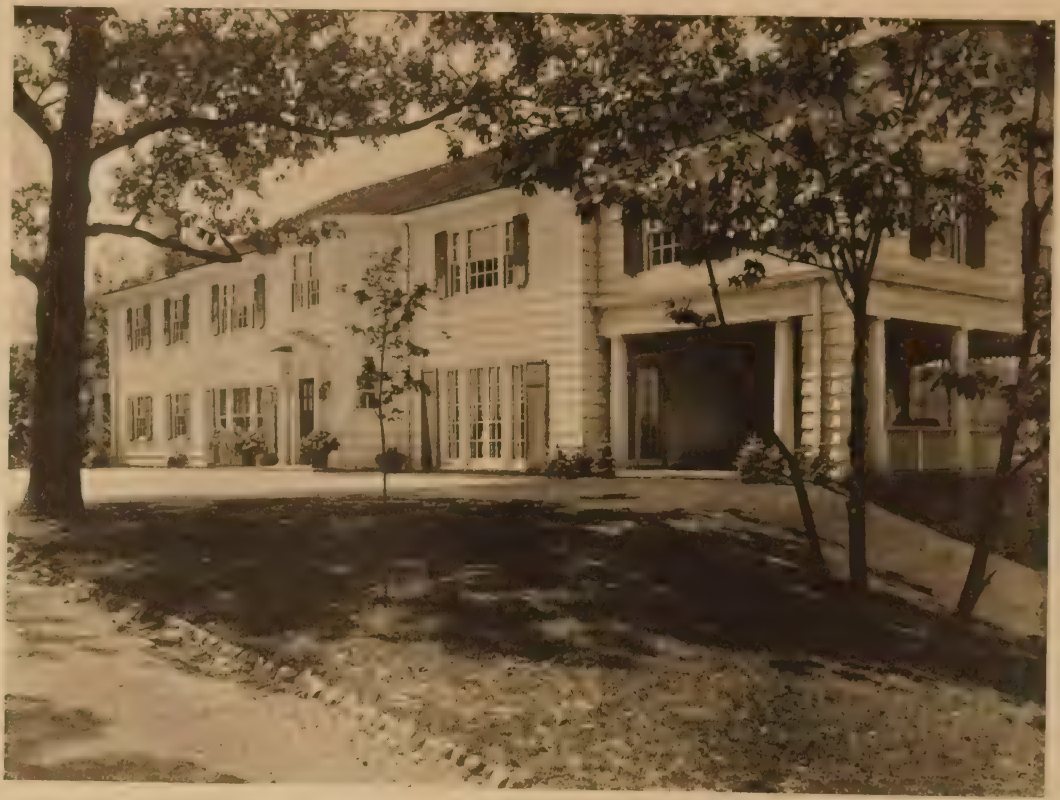
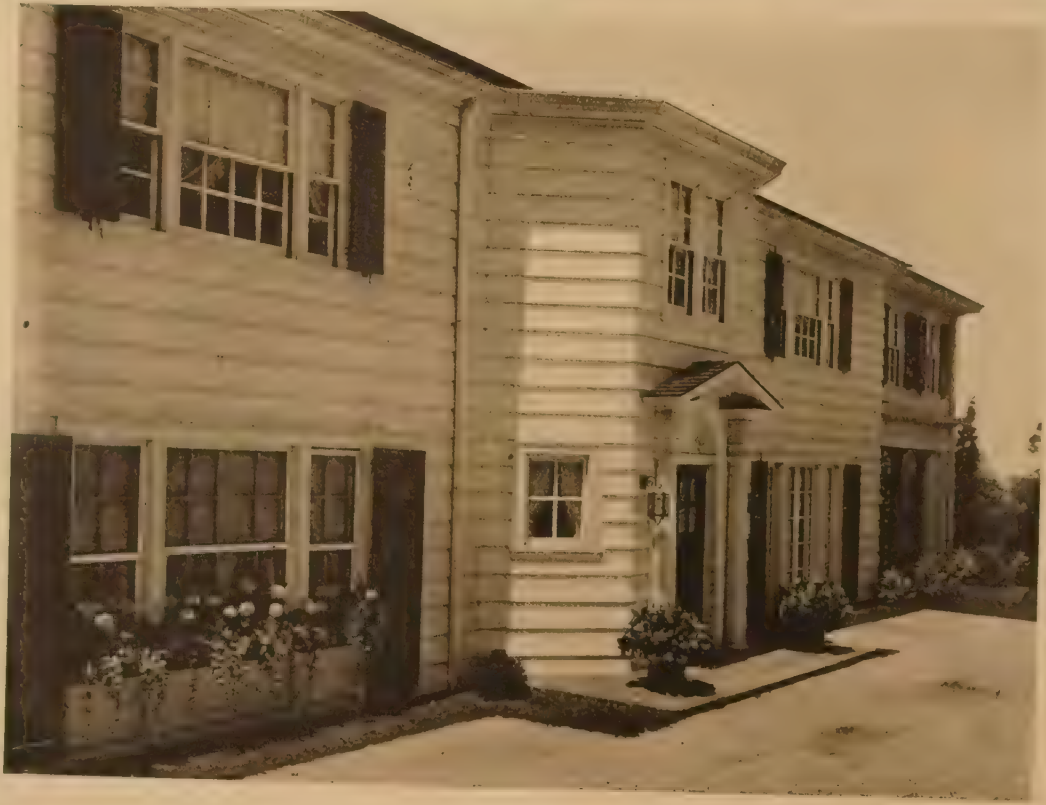
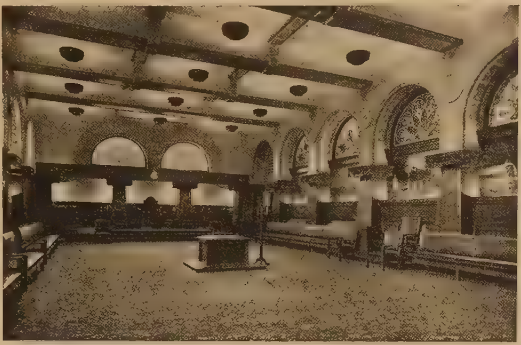




HOUSE, GUSTAV PAGENSTECHER, CORNWALL-ON-HUDSON, N. Y.

Rogers & Zogbaum, Architects



I. MASONIC HALL, AUDITORIUM HOTEL, CHICAGO.

(*Continued from page 295*)

city. In the latter no expense may be spared to introduce air from a strata or level beyond the range of the ordinary pollutions of the atmosphere. Such air may be further washed and cleansed, moistened and heated, but imagine it in the long and circuitous channels and conduits through which it is introduced into the building as robbed of many of the virtues which it may have possessed. The walls of this long route must more or less taint it or cause it to lose its varying character. It must seem to the occupants to have pretty much the same smell all the time. Is it actually or only scientifically pure? Scientific men are already coming to recognize that some of the standards formerly set up as necessary for a safe atmospheric condition are not so absolutely essential. Air may even have a high carbon dioxide content and not be so injurious, providing it is not in so stagnant a condition, but is subject to waves and currents and shows variations which react upon the skin and sensory nerve fibres, giving evidences of tonic and harmonic changes. Air must be conceived of as offering continuously impressions to the nose and skin, which gauge its value.

The problem of ventilation is rendered more and more complex where there is crowding, where the natural is replaced by the artificial. The trend of city development, the skyscraper, makes fresh air costly. Health is very costly, but life, after all, cannot be valued. Is there not, then, an impassable wall in city life? Must not the city sooner or later disintegrate in favor of the country? Health must in the end be the measure of real efficiency. The artificial must bow sooner or later to the natural forces. The laboratory student, with all his earnestness, zeal and ambition in this behalf, has not as much at stake as the poor invalid who has to take to the woods for his life. The sensibilities of the latter are keyed up to protect his waning vitality, and may register discoveries beyond the delicate instruments of the former. Nature in all its nakedness and wildness must more and more be courted when and where it can best develop those sensibilities.

II. ODD FELLOWS HALL, RICHMOND, IND.

In all this Nature but compels man to return to her own side for instruction and life. He has placed his laboratory too near the market-place, too near congested centres, and, though he must study these conditions at close range, his scientific vision becomes blurred—the atmosphere, the fumes, the fret of the environment hammer too much upon his perceptions, and so warp his conceptions, his results. He must know the life and various complications by experience. His conclusions, taken from one side, are sure to include error. His viewpoint must be ventilated, clarified by some of the lessons which those compelled to flee to the country are not only learning, but are happy for the life and all it affords and are desirous of sharing the good things.

SCIENTIFIC ILLUMINATION FOR LODGE BUILDINGS.

LEONARD V. JAMES, E. E.*

THE matter of properly lighting lodge rooms has long received serious attention on the part of architects and decorators, some remarkable and beautiful effects being the result. It has remained, however, for cheaper light, or, rather, the possibility of more light at former rates, due to the development of the Mazda tungsten lamp, to bring good illumination within the reach of all. It is fortunate that, coincident with this possibility, there should appear the indirect or eye-comfort system of lighting, with its wonderful range of uses. Many lodges have already availed themselves of the opportunities thus afforded, but not many have made as general use of good illumination in their buildings as they doubtless would if they were aware of the possibilities.

III. AUDITORIUM, SOUTH SHORE COUNTRY CLUB, CHICAGO.

A beautifully lighted lodge room, from the standpoint of scientific and efficient illumination, as well as in its general appearance, is the new Masonic Hall in the Auditorium Hotel, Chicago. This hall was commonly known as the Egyptian room before it was remodeled for lodge work, and was used for banquet purposes, being rather a large room (40x75 ft.). It was lighted by ten large fixtures, besides balcony lamps, etc., there being in all 560 56-watt carbon

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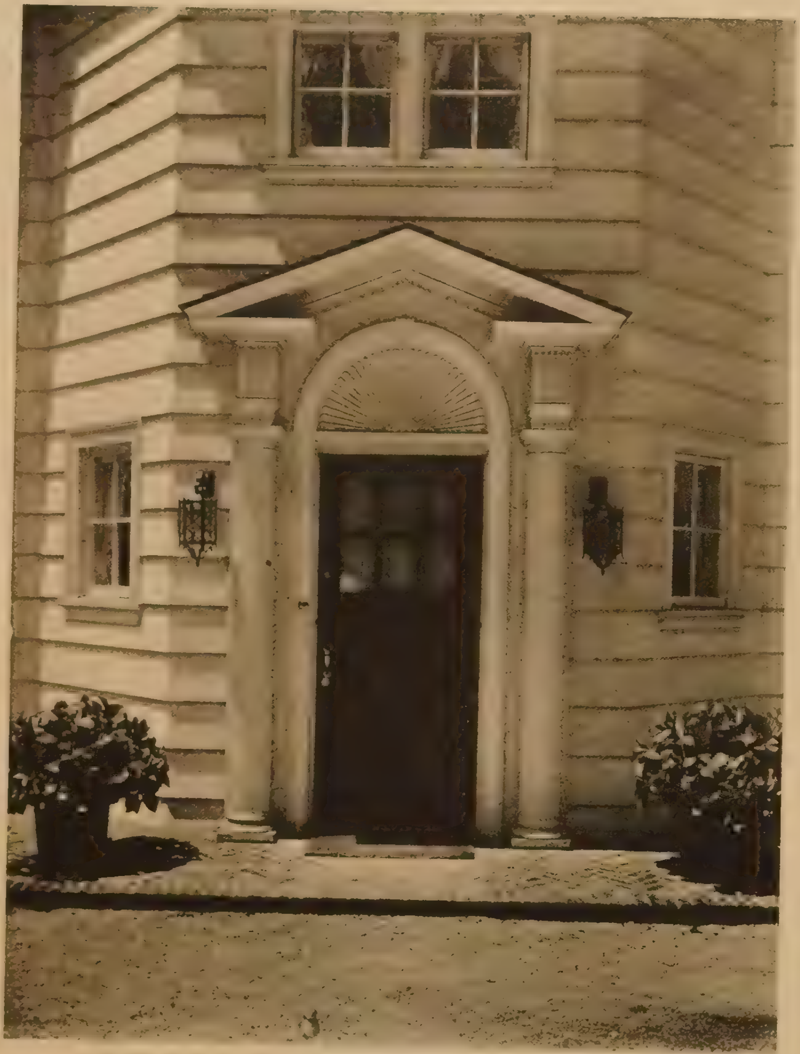
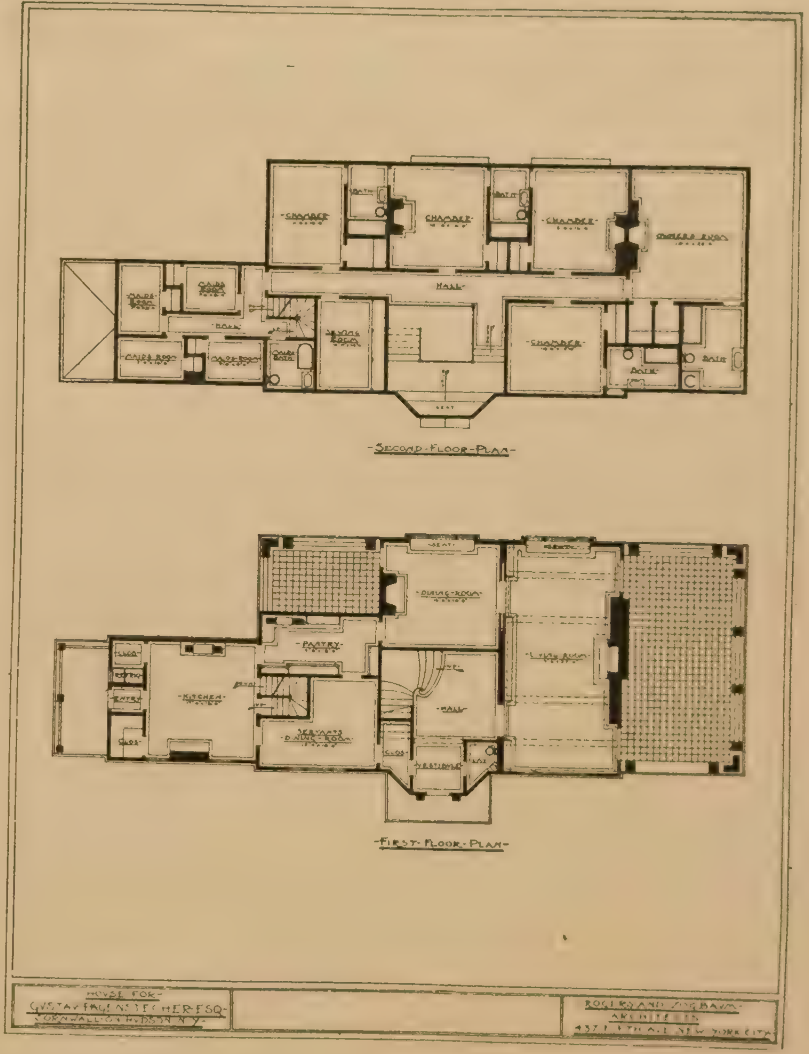
*Associate in Electrical Engineering, University of Illinois, Urbana, Illinois.





ENTRANCE AND PLANS, HOUSE, GUSTAV PAGENSTECHER, CORNWALL-ON-HUDSON, N. Y.

Rogers & Zogbaum. Architects.

IV. HOBRAU CAFÉ, CLEVELAND.

(Continued from page 297)

lamps installed. The result was a brilliant, but not a satisfactory illumination, because of there being too much glare and too many points of light visible to the eye.

Remodeled, the room appears as in Figure 1. There are twenty-one stucco panels on the ceiling, in each of which is hung an opaque bowl indirect lighting fixture of special design. In each bowl there is a 100-watt tungsten lamp equipped with a one-piece silver mirrored glass reflector so designed as to reflect all of the light from the lamp upon a considerable portion of the ceiling. The effect of this is apparent. Instead of there being many small light-sources of high intensity, interfering with vision and filling the room with streaks of glary light and dark shadows, the ceiling is now the source, and the room is flooded with a soft, well-diffused light. The twilight effect produced by means of dimmers with this system is certainly fine.

Between the hand-carved capitals along the walls there are thirteen oil paintings, each of which is illuminated by three 20-watt lamps concealed behind the panel below. Above the paintings and elsewhere there are eighteen art-glass windows, lighted from behind. The only exposed bulbs are the three lights at the altar, and these are frosted. The letter "G" and blazing star is illuminated from within with a single 25-watt tungsten lamp.

A common complaint against indirect lighting is that it is more expensive than direct. In some cases this may be true, although never exorbitantly so, but in the case of this hall it is decidedly not so. The old installation consumed about thirty-one kilowatts, which at the flat rate of ten cents (found in the average city) would have cost $3.10 per hour of service. Omitting all but the ceiling fixtures, the cost would have been $2.00 per hour. Carbon lamps were used in this installation; had equivalent Mazda tungsten lamps been substituted, the charges on the above basis would still have been about $1.00 and 70 cents per hour respectively. With the eye-comfort indirect lighting installation, as now in use, giving a far better quality and a perfectly satisfactory quantity of illumination, the cost at the ten-cent rate would be less than 50 cents per hour, while if the window and picture lamps were not lighted, the charge would be reduced to 21 cents per hour. One reason for the result, as shown by the above figures, is that adequate direct lighting has been compared with adequate indirect illumination. While there are places where direct lighting is desirable, a single lamp is frequently hung in front of the eyes, blinding the user and making him think he has even too much light. A higher illumination is really necessary in such a case because of the natural contraction of the iris of the eye due to the glare.

V. GRILL ROOM, HOTEL METROPOLE, CINCINNATI.

A simple but very efficient installation of indirect lighting is in the Odd Fellows Hall at Richmond, Indiana, shown in Figure II. The fixtures used here listed at about $200 and the cost per hour of operation would be twenty-two cents at a ten-cent flat rate. The chief difference between this room and the one just described is in the smaller number of fixtures, distributing reflectors being used here to such effect that the same quality of illumination is secured. The dome is lighted by small lamps concealed around its edge; were the ceiling flat, doubtless another fixture like the four in use would be installed in the center of the room.

VI. CORNER, READING ROOM, EIGHTH CHURCH OF CHRIST, SCIENTIST, CHICAGO.

The lodge rooms above described are isolated, that is, are not in temples or buildings devoted to lodge purposes. Some of the possibilities where other rooms are used are suggested in the accompanying photographs. Figure III shows the installation in the auditorium of the South Shore Country Club, Chicago. The auditorium is 86x124 feet, and is lighted by three large fixtures in the main part and a number of small fixtures in the promenade. This is another place where a saving was effected by using the indirect system. It was wired and planned for direct lighting; by changing over an actual saving in fixtures and lamps of over $700 was effected, and the cost of operation was reduced over twenty per cent.

The banquet hall in a temple is one of the most important of its rooms, and should be treated as such. Excellent results in restaurant and hotel dining-room illumination have been secured both with special and with standard indirect fixtures. In some cases the reflectors and lamps are concealed in the bowls of what appear to be tall urns; in others, the fixtures are arranged with sections of art glass, which are illuminated by means of small lamps independent of those supplying the general light.

The Hofbrau Cafe, Cleveland (Figure IV), is lighted by means of lamps concealed behind the panels along the walls, and is giving entire satisfaction. The use of arm-fixtures in securing a beautiful effect is shown in the grill room of the Metropole Hotel, Cincinnati (Figure V). The absence of harsh shadows is noticeable in both of these installations.

A very important room in any club-house is the lounging room or library. It is in such places, really, that the eye-comfort or indirect lighting system of illumination is of greatest value, for there it serves to protect the eyes where subjected to the constant effort of reading. An excellent example of good illumination under these conditions is in the reading-room of the Eighth Church of Christ, Scientist, Chicago, a corner of which is shown in Figure VI. The luminous bowl type of fixture, as used in the Du Pont restaurant, is also very satisfactory in rooms of this character.

In none of the cases referred to in this article was the installation made carelessly or at random, but each one was made the object of scientific study by the corps of illuminating engineers connected with the company supplying the fixtures. As a rule this was in response to a request from the local contractor or engineer, although the same courtesy would have been extended without obligation to any one sufficiently interested to inquire and to send the necessary dimensions and information.

BOOK REVIEWS.

Symbolism in Architecture. Arthur H. Collins, M.A. 1913. McBride, Nast & Co., New York. Cloth, $1.75; postage, 14 cents.

The symbolism of animals and birds, used in connection with Architecture, has long been a question of doubt and speculation. The questioning mind has generally concluded that, in the beginning, there was some reasonable logical basis for the use of bird and animal forms in the decoration of our ancient buildings. Quite recently considerable study has been given to the subject. From various sources, Mr. Collins has compiled an instructive book, from which the designer will be able to draw the information needed for intelligent application of the gargoyle and other symbolic forms of ornament.

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